

"Dedicated to Public Service"

THE RADIATOR



W6RHC
IRL #8170
Echolink #322788



<http://www.gearsw6rhc.org>

P.O.Box 508 Chico, CA 95927-0508

Founded: August 13 1939

75 YEARS

February, 2015

Coming Events

O.A.R.S. GENERAL MEETING

Second Friday, every month, at 7:00 p.m., at St. Paul's Church Parrish Hall, 1430 Pine St., Oroville

G.A.R.S. Second Wednesday, each month, General Meeting, Lutheran Church Hall, Artois; 7:00

G.E.A.R.S General Meeting, third Friday each month, at Butte County Search and Rescue Building, Chico. Doors open at 6:30 p.m.

Butte A.R.E.S. MEET: fourth Friday, monthly, at Butte County Search and Rescue Building.

FCC EXAMS - GEARS VEC

First Sunday of every even numbered month.
At the Butte County Search and Rescue Building.
Written test at 2:00 p.m. For information or pre-registration call Tom Rider-W6JS, (530) 893-9211.

Club Events:

News and items of interest
GEARS Calendar...all inside.

Website: www.gearsw6rhc.org



Picture courtesy EVARC

The Prez' Says:

It's February---time for hearts and flowers. The hearts come from the fact that February 14 is Valentine's Day. Don't let the government fool you, Presidents Day is not really on Feb. 14. AND the flowers? Well, besides possibly giving some to your sweetie for Valentine's, the wild things are starting to bloom, right along with landscaping all over the place.

ChicoVelo has been in touch. They're working on a meeting schedule for the Wildflower planning. GEARS is to be included in all the planning. I'm still looking for a co-chair for this event; even though Scott Peterson KE6VUS as EC for the Butte County ARES has said he will be attending the meetings. We know what a hectic schedule Scott has so I DO need another person.

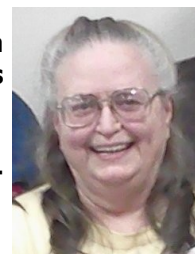
I have only had one volunteer to do the audit. Someone step up to help Evelyn Weir, please.

Oh yes, Scott has had the IRLP up and running, but it has been through his comm van. Apparently there is a problem with the internet provider at that site, He was going to make some inquiries about a new URL (??? did I use the right term??)

All the snowbirds have stretched their wings and flown to the southland. Have had contacts from Quartzite, Phoenix and Texas. Guess I'm just a home body since I like it here. But that doesn't mean I am stuck here. Have made a friend in Queensland, Australia and his 120+ temps remind me that weather like that is on its way again. Let's all pray for rain and a heavy snowpack in the next two months or it will be a nasty summer.

Have a good month and watch for bulletins.

Anna KG6ZOA



MINUTES OF GENERAL MEETING for Jan 16 2015

PROGRAM: DMR Digital Mobile Radio by

ATTENDANCE: ALL officers present.

VEC: The next exam will be on Feb 1st.

TREASURER:

The Treasurer report: Starting Balance \$3003.94; Expenses \$166.42; balance of \$2887.52. The report was approved.

MINUTES: Approved the minutes from December meeting.

OLD BUSINESS:

The new repeater has been received and was displayed for all to see. The interface is being built by Arcom. Update on the interface: it will be delayed due to parts from Yaesu have not been received from Japan. Parts for the home brew buddypole are also delayed.

NEW BUSINESS:

Kent has wood from the Hooker Oak tree if anyone would like a piece.

Wildfire is not in the works yet.

ORS has offered its services for any outside activity.

Stan has offered his welding services for anyone to use.

ADJOURNMENT: 20:41 hr.

Dale Anderson,
Secretary

Board of Directors Meeting: Jan 16 2015

ATTENDANCE: All officers present

OLD BUSINESS:

New repeater has been received, waiting for the interface to our controller. Dale has donated the cost of the interface to the club.

The new repeater needs to be added to the insurance and the old repeater removed.

IRLP Bill needs to re-submitted.

NARC bill has been paid on the 1 January.

NEW BUSINESS:

Stephen McDermott submitted the following.

Demographics; Chico 28, Burney 1, Corning 1, Forest Ranch 2, Hamilton City 1, Magalia 2, Orland 4, Paradise 13, Willows 4, Yuba City 1. Extra 14, Advanced 3, General 26, Technician 11. Email 45, Snail 10.

Members 57 up 5 from last year, Family's 20 up 6 from last year, Lady Hams 11 up 3 from last year. Seven did not renew.

The GEARS home page and membership application has been up dated to reflect the 2015 year.

Stephen McDermott has asked for input on Questions to be submitted to the members on what bands they operate, what they would like to see in our presentations and anything of interest to the club.

Anna will get in touch with the wildflower group to arrange for the event.

MEMERSHIP APPLICATIONS:

None

ADJOURNMENT: 21:48 hr.

Dale Anderson,
Secretary



**GEARS Member, Stan McEtchin-WB6KDZ- among those to
Receive Medal of Honor,**



On February 3, at 3:00 p.m.,(12:00 Pacific time) WB6KDZ-Stan, McEtchin, along with surviving members of the Special Services Forces Unit, more commonly known as "Black Devils", will receive the *Medal of Honor*, recognizing the extraordinary heroism and service of the Special Forces during World War II. The ceremony will occur at Expedition Hall, Washington D.C.; will be televised on C-Span. Subsequently it may be viewed on the CSpan.org website.

Montana U.S. Senators Jon Tester and Max Baucus worked for five years and achieved a major victory in their efforts to award a *Medal of Honor* to the nation's first ever Special Operations Force, known as the 'Devil's Brigade.'

"The Devil's Brigade represented the very best of our Greatest Generation that defeated tyranny around the world," Tester said. "The Medal is the highest honor Congress can bestow, and yet, while a small token of this nation's gratitude, it is an ever-lasting reminder of the sacrifices these men made for all of us."

"Without these brave volunteers, there would be no Special Forces today. I can't think of anyone more deserving of Congress' highest honor, and I've made it my personal mission to ensure the Devil's Brigade receives the... Medal ..." Baucus said.

The Devil's Brigade was formed during WWII and based at Ft. Harrison in Helena, Montana. The Force was a top-secret combat unit comprising 1,800 volunteers from 49 states, the District of Columbia, and Canada. Their training was the first of its kind, specializing in high alpine combat, covert amphibious landings, parachuting, mountain climbing,, and other non-conventional tactics.

When the war ended, the Force had suffered 2,314 casualties, equating to an astounding 134 percent of its original combat strength. It had captured more than 30,000 prisoners, won five U.S. campaign stars and eight Canadian battle honors. The Force never failed a mission.

The unit was instrumental in the liberation of Rome, surprising and defeating massive German artillery units located on treacherous mountain peaks and rocky islands, and in freeing communities in southern France and Italy despite bitter resistance and extreme conditions. The Force also engaged in large-scale raids against the infamous German Hermann Goering First Panzer Paratroop Division. The unit's unique training assured their unparalleled accomplishments. The group paved the way for the nation's modern elite Special Forces, of such highly trained units as Green Berets, & Seal Teams.

There are numerous u-tube videos of this most courageous group of men, one 48 minute presentation well worth your time to view is on u-tube '*Suicide Missions: The Black Devils - FULL SHOW - First Special Service Forces*'.

January Program: Digital Mobile Radio Presentation

Gary Campbell-W6GRC, gave an exuberant presentation on DMR—Digital Mobile Radio— the benefits, possibilities, as well as present international communication opportunities and impacts of DMR on radio communications worldwide. His entire speech and demonstration was spellbinding. Unfortunately, Murphy's Law interceded, and precluded Mr. Campbell's power point presentation, due to the lack of a correct connection between a laptop and a projector.

The primary purpose of DMR is to achieve multifaceted forms of communications transcending established protocols which reach beyond the present parameters of normal Amateur (Ham) Radio, and it's technological confinements. This system is open source, as opposed to D Star, Icom which are closed source systems.

Gary explained the DMR organizers in California (CalDmr) have worked to establish a Statewide DMR repeater system from San Diego to Chico. They have initiated application for placement of a DMR repeater on St. John's Mountain (above Snow Mountain.) to enable DMR coverage from Shasta South, and have plans to eventually encompass the entire State.

The system is worldwide, connected to DMR repeaters in 37 countries, and now boasts over 10,000 users! In fact, Gary demonstrated how quickly and seamlessly an operator may reach an individual in another country using 2 meters and the DMR repeater. His request for a response was answered within less than 5 seconds by a user located in Central Worcestershire, England.

Following is a brief (very) description of DMR :

In California alone, CALDMR Network has more than fifty linked repeaters, located as far south as San Diego, California and as far north as Chico, California. A DMR user can now get almost uninterrupted coverage throughout California's Central Valley, the Northern California coastal regions, the San Francisco Bay Area and much of Southern California. Its repeaters carry 16 standard Talk Groups to connect its users with fellow enthusiasts around the globe, the CalDmr. DMR Network is open without cost, to all interested licensed amateur operators wanting to experience the clarity, flexibility and reliability of a digital network.

Gary Campbell-W6GRC is a resident of Orland. He has been active with the Orland Volunteer Fire Department for 18 years, and maintains all the Department radios and pagers. He became interested in Digital Mobile Radio in 2008, and his enthusiasm has never waned. He envisions DMR's future as a worldwide methodology enabling users all over the world to handle emergency traffic without relying on atmospheric conditions.

For further information, Gary may be contacted at 530-624-4055.

To help familiarize users to the new mode the organization has developed the [CalDmr Guide for Best Practices](#), and makes the [Amateur Radio Guide to DMR](#) available.

Website: CALDMR.org

See also Digital Mobile Radio (DMR) by John S. Burningham, W2XAB

FCC “Paperless” Amateur Radio License Policy Goes into Effect on February 17, 2015

[UPDATED 2015-01-29 1939 UTC] Starting February 17, the FCC no longer will routinely issue paper license documents to Amateur Radio applicants and licensees. The Commission has maintained for some time now that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System ([ULS](#)), although the FCC has continued to print and mail hard copy licenses. In mid-December the FCC adopted [final procedures](#) to provide access to official electronic authorizations, as [proposed](#) in WT Docket 14-161 as part of its “process reform” initiatives.

Under the new procedures, licensees will access their current official authorization (“Active” status only) via the ULS License Manager. The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one. Licensees also will be able to print out an official authorization — as well as an unofficial “reference copy” — from the ULS License Manager.

“We find this electronic process will improve efficiency by simplifying access to official authorizations in ULS, shortening the time period between grant of an application and access to the official authorization, and reducing regulatory costs,” the FCC Wireless Telecommunications Bureau (WTB) said. According to the WTB, the new procedures will save at least \$304,000 a year, including the cost of staff resources.

In [comments](#) filed November 5, the ARRL had strongly recommended that the FCC “give serious consideration to continuing a default provision for sending an initial paper license document to new licensees in the Amateur Radio Service, along with detailed, simple instructions for how to make the elections set forth in the notice relative to future modified or renewed licenses.”

Under the new procedures, a new license applicant who already has an FCC Registration Number (FRN) and provides a valid e-mail address under “Applicant Information” in the ULS will receive an official ULS-generated electronic authorization via e-mail. New license applicants lacking an FRN will receive in the mail an FRN and a temporary password to access the Commission Registration System (CORES).

New applicants will no longer automatically receive a license document and must request one by changing their “Paper Authorization Preference” in the ULS License Manager.

The ARRL and other Amateur Radio commenter's also worried that unless a license document is printed on distinctive paper stock, its authenticity could be questioned in such situations as obtaining vanity call sign license plates. (pg 6)

FCC (continued from pg 5)

To address this, the FCC said the watermark "Official Copy" will be printed on each page of an official authorization that a licensee prints out from the ULS. The WTB recently stopped using distinctive paper stock to produce hard copy licenses and has been printing these on "standard, white recycled paper." The Bureau noted that the distinctive paper stock it had used was six times more expensive than the plain recycled paper it now uses.

The ULS License Manager now includes settings that allow licensees to notify the WTB that they prefer to receive official authorizations on paper. Once the final procedures go into effect designating electronic access as the default, licensees can change the ULS License Manager setting so that the Bureau will print and mail a license document. Licensees also may contact [FCC Support](#) via the web, telephone or mail to request paper licenses.

The FCC rejected as "outside the scope of this proceeding" an ARRL argument that Section 97.23 of the Amateur Service rules be amended to replace "licensee mailing address" with other alternatives, including e-mail, for use in Commission correspondence. The rule, which requires that any licensee mailing address be in an area where the licensee has US Postal Service access, has precluded FCC issuance of location-specific call signs in such areas as Navassa Island (KP1) & some Pacific Islands.

TUBE OF THE MONTH

The RAC3

The RAC3 was a triode designed for early battery receivers starting in 1920. It was made by E. Myers and the Radio Lamp Corp. in Jersey City, N.J. They also made a special base.

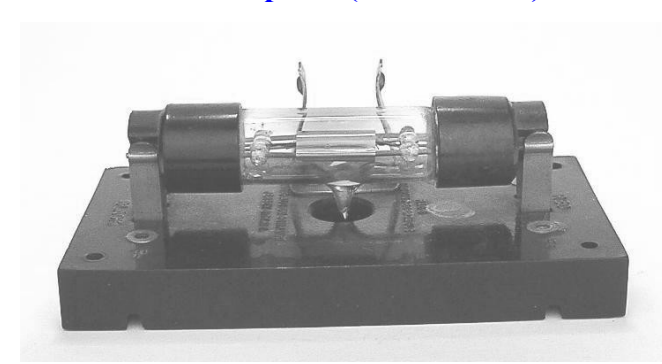
Length = 3.31" Diameter = .75"

Max voltage = 22

Max current =

Fil voltage = 4

Fil current = .8 amp (Norm N6JV)



Caps embroidered with your name and your call sign may be ordered by contacting WA6ZRT -Gene Telephone #530 -345-3515

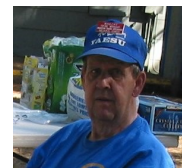
VEC TESTING
2:00 p.m.

February 1, 2015
April 6, 2015

AT BUTTE COUNTY
SEARCH & RESCUE
BUILDING

All Classes
Technician, General and
Extra.

Contact: W6JS
Tom Rider
530-893-9211



GEARS MEET A MEMBER—WA6ZRT LAWTON "GENE" WRIGHT

Gene Wright, WA6ZRT, was born in 1939, the same year GEARs was founded, and he's been a member for 35 years. Gene and his charming wife Mary Ann have been happily married for 54 years.

Gene first became interested in ham radio as a Marine stationed in Okinawa, when he found out he could use ham radio to talk to Mary Ann back in the States. A ham in Okinawa would contact a ham in the US via radio, and the ham in the US would make a phone call to the Marine's family, and they could talk from half way around the world. Mary Ann said it was a blessing to be able to talk to him, because she knew at least for that moment he was OK. That was pretty high-tech in 1964.

Gene was impressed, and decided to get his ham radio license. You had to know Morse code at that time, but that was no problem for Gene, because he was a radio operator for the Marines, and he could already read Morse at 25 words per minute.

His first license was a "conditional" class license, similar to a current general-class license today. The FCC eliminated the conditional-class license sometime in the 1970s, so Gene's license was "grandfathered-in" as a general. His current license is extra-class.

After he received his ham license, Gene got so interested in electronics that he signed up for six more years in the military in order to learn electronics and radar fundamentals. After starting as a specialist on the Hawk missile system launch control system, he soon earned a promotion, and was trained to work on every part of the system. If any one of the missile groups had technical problems, he would travel to wherever that missile battery was stationed to help fix it.

After his service in the Marines, Gene accepted a job as a civilian contractor working for Raytheon. Mary Ann and the boys moved with him to Korea. They lived in an apartment which was on the second floor of a three story house. The family that owned the house lived on the first floor, but their "mama-san" lived on the top floor, with Gene and his family in the middle. Mama-san had to walk through their apartment in order to get downstairs.

Mary Ann said living in Korea gave her a different perspective on foreign cultures that has stuck with her to this day. It helps her understand some of the struggles faced by people in other countries, and makes her appreciate how much we have in this country. She would not trade that experience for anything, but would not want to repeat it.

While he was in Korea, Gene joined the Raytheon bowling team. He brought a bowling ball back as a gift for Mary Ann, and they've been bowling together ever since. Gene still bowls Monday nights on the Elks team. Wednesday nights Gene and Mary Ann bowl together on the "mixed-four" league. Both Gene and Mary Ann are honored in the Bowling Hall of Fame. Gene also plays golf at Bidwell twice a month with the Sons in Retirement (SIRs).

When Gene moved to Chico in 1974, a first-class radio license was required for his job at KHSL. It took him three trips to San Francisco to pass the test.

Later he worked for JC Penny's department store repairing electronics and appliances. After Penny's closed their product service department, he opened his own business, "Wright's Repair", while moonlighting as a teacher at Butte College in the evenings.

In 1984, a position opened up at PG&E for a communications repair tech. This required a first-class FCC license, and fortunately Gene already had one. At PG&E, he worked on microwave systems, telephone systems, computers, and every type of wiring. He could hardly believe they would pay him \$18 per hour, even while he was just riding in the truck. After a long day at work, he could use the ham radio in his truck to key up the 2-meter repeater and call Mary Ann over the phone-patch to let her know when he would be home.

He worked for PG&E for 16 years, and loved it. The best part was that the work took him to so many mountain tops and other beautiful places. But working for PG&E, there was always a threat that if he messed up too bad he'd be sent to Fresno or Bakersfield as punishment.

While his boys were growing up he didn't have much time or money for ham radio, but after he had been working for PG&E for a few years, Mary Ann encouraged him to get back into it. So around 1987 he bought a Yeasu 757-GX2. He just recently upgraded to an Icom 756 Pro-III.

Gene has owned Yeasu radios for many years. He said once you learn the menu system, they are easy to use. Mary Ann bought him his first 2-meter Yeasu as a Christmas gift. He had that radio for a long time before he finally upgraded to a pair of dual-band Yeasu FT-8800R VHF/UHF radios (144/440 MHz), one at home, and one in his truck.

Although he can still copy Morse code at 16 words per minute, he prefers voice. He always enjoyed rag-chewing and still does today. But his over-all favorite ham activity is field-day.

He built a homebrew 20 meter wire dipole for field-day, which he likes to string up between two trees, using a sling-shot to throw a line over a high branch. The first time he put that antenna up, his very first contact was a Ham in Italy, and that was the first time he ever made a contact in Europe. He has used the same antenna for field-day many times since, because it works so well.

Gene says if you're going to be a member of an organization, you should get involved. He was on the board of directors for the bowling league for many years, and Mary Ann was president. Gene was also treasurer of GEARS for six years, and president for three. Although when you join GEARS, he says, you can do as much or as little as you want. If you just want to do field day, you can do that. (I'm not completely sure I believe him.)

One of Gene's favorite bands is 17-meters. It's good for rag-chewing because it is a WARC band where there is no contesting. He also checks into the GEARS net on Tuesday evenings, and the simplex net on Thursdays.

Gene has a "hex-beam" antenna for HF. He likes the hex-beam because it performs well and holds up well in high winds. He also has a G5RV antenna, and can easily switch between them.

These days he also has his radio hooked up to his computer, and occasionally gets on some of the digital modes like PSK31, if he can find somebody who wants to rag-chew.

When I asked Gene for advice for new hams, he said: "[Listen for a while to get a feel for it before you start talking. And if you are going to be part of a club or group, go ahead and get involved.](#)"



Interview by: Michael Favor-N6NAV





GEARS new Fusion Repeater
On display



Section Mgr. Ron Murdock –W6JK
And JoAnne Murdock-N6NYL
among visitors January meeting/program



DMR-Motorola Repeater
the repeaters utilized for DMR



Don Stanton—W6LYX



Random Snapshots of members during January GEARs Meeting



From our photo gallery, random pictures of our Member of the Month, WA6ZRT—Gene Wright.

Two Meter Coat Hanger Antenna

Hams are inventive creatures, especially when it comes to antennas. We seem to have an innate ability to build antennas with the least amount of parts, cost and radiate on the frequency it was designed for.

Being part of this fraternity I have built many HF dipole antennas from 10 to 80 Meters and they have always worked very well and with stood nature's wrath without falling and returning to the ground.

However, I have never made a $\frac{1}{4}$ wave antenna for 2 meters. So to correct this oversight, I decided to approach this new venture.

Design

The design of this antenna would be make a 2 meter $\frac{1}{4}$ wave antenna out of parts that I had on hand, making it flexible, aerodynamic efficient so it could with stand a strong winds and not be bent out of shape from weather events. The radiating element & radials would be attached to a five-hole SO-238, and hopefully with a low SWR.

Frequency & Parts

Frequency: 144 to 148.

Parts would consist of a stiff wire, bendable when stressed, and returns to its original position. Stainless steel hardware (4-40) consisting of bolts, washers, lock washers and nuts, one five-hole SO-238 new or used, a good weather sealant to seal up the hardware

Construction

I did a little searching on GOOGLE for "2 meter quarter wave antennas" and found a plethora of information, styles and construction methods. Some were using Romex house wire, 14 gauge copper weld antenna wire, welding wire; aluminum TV tubing, etc. None of them seem to work for my construction application.

Then the light bulb went off in my brain. ***Iron coat hangers!***

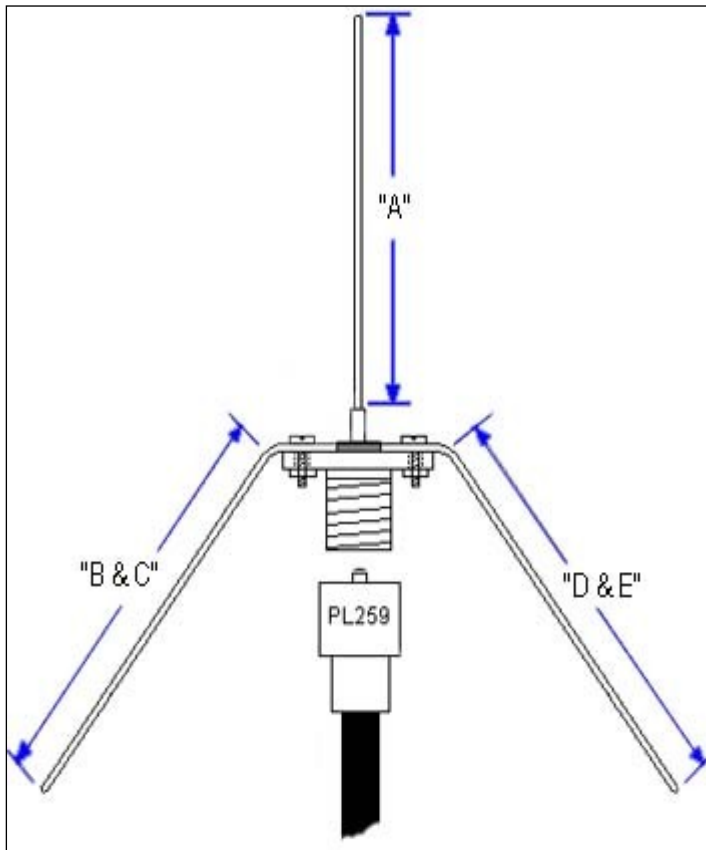
I found 6 that were just hanging around in my closet (pardon the pun; that was just too obvious to pass up). One was the old iron style heavier, larger gauge; the other five were smaller gauge, the newer variety; with white coatings on them. After gathering all of them, I cut off the "hook" of each of them and then straighten them out. The smaller diameter ones were easier to bend and some of the coating chipped off as I bent them straight. The old iron one was tougher; it required a vise grip and a pair of pliers to get it straightened out. I did notice the older iron hanger had a slight coating on the metal, I guess this was on there to prevent rusting.

Doing the Math &Measuring Twice, Cutting Once

As with all antenna projects determining the length of your antenna to the frequency you want it to resonate is most important. So **to figure out the length of the antenna's vertical and radial elements, I use the following formula below.**

(con't on page 11)

Length in inches: $2808 \div 146.00 \text{ MHz}$. The vertical "A" calculated out to 19.232876, so I measured the vertical to 19.25". I added 5% to the radials "B&C, D&E" they calculated out to 20.194519, I measured them to 20.25".



After I measured them, I marked them with a black pen and cut them. I made a hook on one of the ends of the 4 radials, it kind of looks like a "?". This is where the 4-40 screws will go through the SO-238.

OUCH & Blood: The cut ends are very sharp. I jabbed myself once and drew blood when I was attaching one of the radials to the SO-238. After this incident, I put three layers of black electrical tape over the ends to prevent that from happening again.

I discovered the larger wire diameter would not fit in the solder pin on the back of the SO-238, so it was used for one on the radials. Before I soldered the vertical wire to solder pin, I removed the coating from one end of the wire and tinned it, and also tinned the post on the SO-238 and soldered it on.

Putting it All Together

Before I did anything to start to put the antenna together, I neutered the bite of the radials tips. I removed the black tape I had put on the ends and replace them with clear beads on each of ends of the radials, the radiating element got one also. A dab of clear hot glue on the ends and backside of the beads took the teeth out of these little pokers.

In order to have continuity between the radials and the SO-238 I had to scrape all the coatings from all the wires that were going to be in contact with the SO-238. This was easily accomplished by some sand paper and elbow grease. The last step to do to complete radials before mounting them is to bend them to a 45° angle. Having a protractor was a necessity of getting the angle correct at 45°.

By bending the radials down to a 45° angle, you are changing the impedance of the antenna. At 45° the antennas impedance matches that of the coax cable at about 50 Ohms.

The next part of this construction was to attach the radials to the SO-238. It is important that I kept a 90° angle between the four radials and 180° opposed, directly in line with each other for the best pattern. I sealed the top of the SO-238 with marine sealant and all the areas where

(continued from page 11)

coatings had come off when bending. It worked very well for this application.

Sweeping the Antenna

This last step of this build is to sweep the antenna to see if resonate at the desired frequency between 144 and 148 MHz and check the SWR. My calculations were very close to my SWR goal. My antenna analyzer told me the SWR was no higher than 1.5.

Placement

This antenna will be for my IC-8000 in the garage and it will be placed on my fence using a 12' PVC.

A little sweat & blood, this has been an interesting project. Taking parts of what I could find in my junk boxes, closet, and some old PVC plastic pipe and at a minimal cost and making a working 2 meter antenna.

Stephen, W6AKF



Tinkering...tinkering...KE6VUS

NOTES FROM YOUR V.P.-KE6VUS

Hello all and hope we find ourselves busy as bee's having fun doing what we love to do. For me it's tinkering. Especially with "HAM" Amateur radio. Where else can I build, test on air, experiment with all kinds of neat stuff that somehow can interact with lots of my other stuff, and the F.C.C. doesn't get upset.

Case in point. my Yeasu 857d, pretty nice little rig, but has a neat computer aided control feature. using Ham Radio Deluxe (I still have the free version 5.0) I tie my radio to my computer. Then for remote control I can use my cell phone with a free Android program, called RX TX, and with Skype can remotely talk via the Internet to my radio.

This is way too cool. Then in addition I can tie my 12 vdc portable rotor, Portable rotation dot com, into my Ham Radio Deluxe, and let my Ham Radio Deluxe software turn my rotatable dipole. What is really cool is I can enter the call sign of who I am talking to and it checks qrz web site and automatically turns. Not bad for a portable station!

Tinkering is fun! Tinkering and my radio, and all my friends on the other end of my microphone. Who could ask for more?

73's to all and keep that tinkering spirit alive!

Scott ke6vus : vice-pres

ARLB002 Michigan Passes, Governor Signs Antenna Accommodation Legislation

Ten years of work within the ARRL Michigan Section have culminated in an Amateur Radio antenna bill that mirrors the "reasonable accommodation" provisions of the PRB-1 federal pre-emption policy.

Michigan Gov Rick Snyder signed the measure, Senate Bill 0493, into law on January 15, creating Public Act 556. Senator Rick Jones sponsored the bill. ARRL Michigan Section Manager Larry Camp, WB8R, said Michigan is the 31st state to have a PRB-1 bill on its books.

"The current PRB-1 Team has been working for 3 years to get this accomplished," he said. "Our bill endured four votes on its way to becoming law - Senate and House committees and the Senate and House floors. Each vote was unanimous."

The most pertinent language in the new Michigan law, which comes directly from Part 97.15 of the FCC Amateur Service rules, states: "An Amateur Radio Service station antenna structure may be erected at heights and dimensions sufficient to accommodate Amateur Radio Service communications. Regulation of an Amateur Radio Service station antenna structure by a local unit of government must not preclude Amateur Radio Service communications. Rather, it must reasonably accommodate those communications and must constitute the minimum practicable regulation to accomplish the local unit of government's legitimate purpose"

The new law also provides for an advisory committee that may be established jointly by the Michigan Section and other state organizations, such as the Michigan Municipal League and the Michigan Township Association. Camp said the advisory board could become involved at the request of the amateur, the community, zoning board, or representative associations as required. "The purpose of having the Michigan Section and the ARRL named specifically," Camp said, "is to ensure that the technical information that the advisory committee receives is accurate and pertinent to the questions at "The Michigan Section of the ARRL will be available to provide information and training as an ongoing educational effort for communities and their representative organizations," Camp added.

Camp said the PRB-1 Team believes the advisory committee will be an important tool in situations when community officials know little or nothing about Amateur Radio. "We will be able to provide accurate information and support from the ARRL, as required," he said. "This committee will help explain the reasons why radio amateurs need to have antennas in the air in order to communicate in an emergency."

The new law also echoes federal requirements that owners of certain Amateur Radio antenna structures extending more than 200 feet above

(continued page 16)



Sierra Foothills Amateur Radio Club presents:

Hamfest 2015

March 14th 7:30



**At the Historic Loomis Train Depot Plaza
for the First Swap of the Year.**

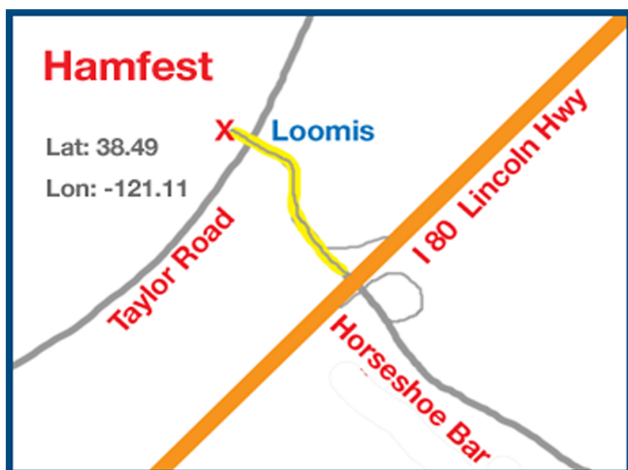
**Bring your stuff to sell
or come by look at it all, meet your
friends and perhaps win in the drawing.**

Seller spaces: \$10 - Drawing tickets \$1ea

**This is our first annual Hamfest
and are going all out to make it your favorite.**

FREE Buyer's parking, FREE Admission

Drawings - coffee & donuts - local vendors



Directions:

Located Northeast of Sacramento or
Southeast of Auburn off Interstate 80.

Loomis Exit off I80 - Horseshoe Bar Road
Go NNW to the Taylor Road stoplight.
Then go straight into the Hamfest.
Follow signs to Buyer's parking.

Seller's turn right at the stoplight, then
turn into the Seller's parking area.

Talk-in on W6EK/r 145.430 pl 162.2Hz

CQ Hamfest - CQ Hamfest - CQ Hamfest - CQ Hamfest - CQ Hamfest - CQ Hamfest

Sunday, February 1, 2015 April 5, 2015	2:00 p.m.	VEC—Exams	Butte Co. Search & Rescue Building 2591 Morrow Lane, Chico	Tom Rider-W6JS 530 893-9211
Wednesday February 11, 2015	7:00 p.m. . Christmas Potluck Meeting	GARS-Glenn Glenn Amateur Radio Society General Meeting, & Amateur Radio Emergency Services	Lutheran Church Hall: 565 Main Street Artois	Albert Leyva- N6YCK 530-567-5979
Friday, February 13, 2015	7:00 p.m.	OARS Oroville Amateur Radio Society General Meeting	St Paul's Church Parrish Hall 1430 Pine Street Oroville	Gary Clark KF6EWO 530-534-7435
Friday February 20, 2015	7:00 p.m.	GEARS Golden Empire Amateur Radio Society General Meeting	Butte County Search and Rescue Building 2591 Morrow Lane Chico	Anna Horn -kg6zoa 530-877-5939
Friday February 27, 2015	7:00 p.m.	Butte Co .ARES	Butte County Search & Rescue Building 2591 Morrow Lane Chico, CA	Scott Petersen KE6VUS 530-876-1526

CW CLASS

The CW class being taught by Lee (KC6MCI) and Lonnie (KI6ZYY) & began on January 9th. Sessions begin at 6:30pm, on Friday Nights.

The frequency is 146.430 MHz FM simplex. Simplex is going to be used since most new hams will not have an all-mode transceiver capable of operating in CW mode.

From Valley Ham News



Happy Valentine's Day



The GEARS Newsletter Staff:**Editor and Publisher.....**Dorothy Post**Printing & Distribution for snail mail:** Evelyn Weir**Website...**Stephen McDermott W6AKF

The Radiator is a monthly publication of the Golden Empire Amateur Radio Society (GEARS). It is the policy of the Editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio, of interest , and space is available. Please send all submissions to the Editor – Dorothy Post by the last day of the month through the following medium: E-mail: dj@posthouse.us

Club Officers: (Board of Directors)

PresidentAnna Horn –KG6ZOA

Vice President..... Scott Petersen-KE6VUS

SecretaryDale Anderson-KK6EVX

Treasurer.....Lester Mikeworth KG6KUO

Past PresidentGene Wright-WA6ZRT

Director..... Tom Rider-W6JS

Director.....Stephen McDermott W6AKF

Director.....Stephen Wolske-KF6HSS

Club Meetings**General Meeting Third Friday 6:30 PM****Board Meeting Third Friday 9:00 PM****GEARS Club Net****Tuesdays 8:00 PM 146.850 MHz-PL 110.9****GARS Club Net:Monday, 7:00 p.m. 147.105+Mhz PL 110.0****Sacramento Valley Traffic Net****Nightly 9:00 PM 146.850 MHz-PL 110.9****ARES Nets:****Butte Mondays 8:00 p.m. 145.280 MHz-PL 110.9****Yuba Sutter Thursdays 7:00 p.m. 146.085+MHz PL 127.3****Glenn Thursday 7:30 p.m. 147.105 MHz +PL 100.0****Other Nets:****Sac Valley Section Net—7:00 PM 2nd Wed of the month 146.085 MHz+PL 127.3****440 Wed. Night 8:00 PM Wednesday 440.650 MHz****Golden Bear 7:00 PM Daily 3975 kHz****Willie Net 8:00 PM Mondays 1930 kHz****ARISS (International Space Station) Uplink 144.490 MHz****Downlink 145.800 MHz****Hope-1 satellite: all uplinks are in 145Mhz band:****All downlinks are in 435Mhz band****California Traffic Net: 3906 KHz nightly @6:00 pm****For traffic listing & @6:30 p.m. for roll call.****Western Public Service System (WPSS) Net Time Change****Early Monitoring begins @ 1800 (6:00 p.m.)****Local PST or PDT****Roll Call Commences at 1930 (7:30 p.m.)****Local (PST or PDT)****(Michigan Antenna Legislation con't from page 13)**

ground level at the site or that are located near or at an airport must notify the Federal Aviation Administration and register with the FCC.

In addition to Camp and ARRL Great Lakes Director Dale Williams, WA8EFK - who served as an advisor - Michigan PRB-1 Team members included State Government Liaison Ed Hude, WA8QJE; Local Government Liaisons Butch Hedges, KD8NKJ, and Hal Thomas, N8HAL; Webmaster Jay Nugent, WB8TKL; Legal Advisor Raoul Revord, W8RDR, and Public Information Officer Pat Mullet, KC8RTW.

(From ARRL Headquarters January 16, 2015-To all radio amateurs)

[MARS \(Military Auxiliary Radio System\) and Homeland Security recognizing the value of Amateur Radio?](#)

On Pages 86 & 87 of the February 2015 QRZ are articles regarding Homeland Security now expressing a desire to incorporate Amateur Radio Operators in the agencies disaster emergency planning, as "important conduits for relaying information to response agencies ...when other forms of communications have failed or have been disrupted. Also, The Army and Air Force branches of the Military Auxiliary Radio System (MARS) now incorporating (in their emergency disaster exercises) Amateur Radio modalities to establish the effectiveness of use of Amateur Radio communities in conjunction with their established practices.